

## **ALTERING EXECUTION FLOW OF A COMPUTER PROGRAM AT RUNTIME**

### **ABSTRACT**

- 5    A debugger alters the execution flow of a child computer program of the debugger at runtime by inserting jump statements determined by the insertion of breakpoint instructions. Breakpoints are used to force the child computer program to throw exceptions at specified locations. One or more instructions of the computer program are replaced by jump instructions. The jump destination addresses associated with the break
- 10    instructions can be specified by input from a user. The debugger changes the instruction pointer of the child program to achieve the desired change in execution flow. No instructions are lost in the child program.